Serial No.: 09/528,766 Art Unit: 3746

Examiner: SOLAK, Timothy P.

IN THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

1. - 37. (Canceled)

38. (Previously Presented) A fuel injection system, comprising:

a fuel reservoir; and

at least one reciprocating fuel pump assembly in fluid communication with the fuel reservoir, each of the at least one reciprocating fuel pump assemblies comprising:

a housing assembly including a drive section and an adjacent pump section;

a drive assembly disposed in the drive section, the drive assembly including a permanent magnet and a coil assembly having a winding, one of the magnet and the coil assembly being capable of reciprocal movement along an axis between a first position and a second position with respect to the other, the one forming, at least in part, a movable member, application of a signal to the winding causing movement of the movable member between the first position and the second position;

a resilient member biasing the movable member in the first position; and

a pump assembly disposed in the pump section, the pump assembly including a pump member capable of reciprocal movement, the pump member operatively connected to the movable member, movement of the movable member causing movement of the pump member.

39. (Previously Presented) The fuel injection system of claim 38, further comprising:

a first fuel pump for drawing fuel from the fuel reservoir;

Serial No.: 09/528,766 Art Unit: 3746

Examiner: SOLAK, Timothy P. Page 3 of 9

a separator for receiving fuel from the first fuel pump; and

a second fuel pump for drawing fuel from the separator.

the at least one reciprocating fuel pump assembly receiving fuel from the second fuel pump.

40. **(Previously Presented)** The fuel injection system of claim 39, further comprising:

an inlet manifold receiving fuel from the second fuel pump, the at least one reciprocating fuel pump assembly drawing fuel from the inlet manifold; and

a return manifold for returning excess fuel from the at least one reciprocating fuel pump assembly to the separator.

- 41. **(Previously Presented)** The fuel injection system of claim 38, wherein the at least one reciprocating fuel pump assembly comprises a plurality of reciprocating fuel pump assemblies.
- 42. **(Previously Presented)** The fuel injection system of claim 38, further comprising an injection controller to control the operation of the at least one reciprocating fuel pump assembly.
- 43. **(Previously Presented)** The fuel injection system of claim 38, wherein the coil assembly surrounds the permanent magnet.
- 44. **(Previously Presented)** The fuel injection system of claim 38, wherein the movable member includes the coil assembly.
- 45. **(Previously Presented)** The fuel injection system of claim 38, wherein the permanent magnet comprises two permanent magnets.

514-732-7065 >>

Serial No.: 09/528,766 Art Unit: 3746 Examiner: SOLAK, Timothy P.

Page 4 of 9

46. **(Previously Presented)** The fuel injection system of claim 38, wherein the at least one reciprocating fuel pump assembly further comprises a nozzle in fluid communication with the pump assembly for expressing pressurized fluid from the pump assembly.

47. (Previously Presented) An internal combustion engine, comprising:

at least one combustion chamber; and

a fuel injection system having a reciprocating fuel pump assembly associated with the combustion chamber to inject fuel therein,

the reciprocating fuel pump assembly comprising:

BRP

a housing assembly including a drive section and an adjacent pump section;

a drive assembly disposed in the drive section, the drive assembly including a permanent magnet and a coil assembly having a winding, one of the magnet and the coil assembly being capable of reciprocal movement along an axis between a first position and a second position with respect to the other, the one forming, at least in part, a movable member, application of a signal to the winding causing movement of the movable member between the first position and the second position;

a resilient member biasing the movable member in the first position; and

a pump assembly disposed in the pump section, the pump assembly including a pump member capable of reciprocal movement, the pump member operatively connected to the movable member, movement of the movable member causing movement of the pump member.

Serial No.: 09/528,766 Art Unit: 3746

Examiner: SOLAK, Timothy P. Page 5 of 9

48. (Previously Presented) The internal combustion engine of claim 47, wherein the at least one combustion chamber comprises a plurality of combustion chambers, and

wherein the fuel injection system has a plurality of reciprocating fuel pump assemblies, each of the fuel pump assemblies being associated with a combustion chamber.

- 49. **(New)** The fuel injection system of claim 38, wherein the movable member and the pump member move in the same direction.
- 50. (New) The fuel injection system of claim 38, wherein the movable member contacts the pump member, forcing the pump member against the bias of the resilient member.
- 51. (New) The fuel injection system of claim 38, further comprising:

a pump chamber formed in the pump section, the pump chamber having a side wall; and

a fluid inlet passage disposed in the side wall of the pump chamber.

52. (New) The fuel injection system of claim 38, further comprising:

a fixed member formed at least in part by the other of the magnet and the coil assembly;

the movable member moving away from the fixed member when moving from the first position to the second position.

53. **(New)** The internal combustion engine of claim 47, wherein the movable member and the pump member move in the same direction.

BRP

Serial No.: 09/528,766 Art Unit: 3746

Examiner: SOLAK, Timothy P. Page 6 of 9

54. (New) The internal combustion engine of claim 47, further comprising:

a pump chamber formed in the pump section, the pump chamber having a side wall; and

a fluid inlet passage disposed in the side wall of the pump chamber.

55. (New) The internal combustion engine of claim 47, further comprising:

a fixed member formed at least in part by the other of the magnet and the coil assembly;

the movable member moving away from the fixed member when moving from the first position to the second position.